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SYMBOL DESCRIPTION								,					DATE			APPROVAL			
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SHEET REVISION STATUS																			
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ORIGINATOR J. J. J. J. J. King /Unisys					DATE 7-9-91				FSC: 4540										
The state of the s					7-12-91			Detail Specification for Thermofoil Heater											
ADDITIONAL APPROVAL							<del>-4: -</del> ,	<del>1 -2-</del>		S-311-P-079/07									

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION GODDARD SPACE FLIGHT CENTER GREENBELT, MARYLAND 20771

CAGE CODE: 25306

PAGE 1 OF 3

## 1. SCOPE

- 1.1 Scope. The complete requirements for procuring the heater described herein shall consist of this detail specification and the issue in effect of GSFC specification S-311-P-079.
- 1.2 Goddard part number. The heater shall be identified by the part number listed in table I.
- 2. APPLICABLE DOCUMENTS
- 2.1 <u>Applicable documents</u>: The following document, of the issue in effect on the date of invitation for bids, for a part of this specification to the extent specified herein.

Specifications

## NASA/GSFC

S-311-P-079 Procurement Specification for Thermofoil Heater

## 3. REQUIREMENTS

- 3.1 <u>Detail requirements</u>. The individual item detail requirements shall be in accordance with GSFC procurement specification S-311-P-079, and as specified herein.
- 3.2 <u>Dimensions and configuration</u>. Heaters shall be of the physical dimensions and configuration as specified in Table I. The length and width of each heater shall not vary by more than ±.06" for dimensions from 6.01" to 12".
- 3.3 D.C. Resistance (DCR). DCR of the heaters shall be as listed in Table I with a tolerance of ±3%.
- 3.4 <u>Power Rating</u>. The power rating of the heater shall be as listed in Table I.
- 3.5 <u>Heater Elements</u>. The circuitry layout shall be non-inductive and shall provide uniform packing density for uniform heat transfer over the heat sink surface area.
- 3.6 <u>Insulator</u>. The heater shall contain a Kapton film insulator. The thickness of the Kapton film insulator, located on the surface without adhesive, shall be 3 mils.
- 3.7 <u>Adhesive</u>. All heaters shall be coated on one side with a pressure sensitive adhesive with release paper backing. The adhesive used shall be Minnesota Mining and Manufacturing (3M) Type 966.

- 4. PRODUCT ASSURANCE PROVISIONS.
- 4.1 <u>Qualification inspection</u>. Qualification inspection shall be in accordance with GSFC S-311-P-079.
- 4.2 <u>Ouality conformance inspection</u>. Quality Conformance Inspection shall be in accordance with GSFC S-311-P-079.
- 5. PREPARATION FOR DELIVERY
- 5.1 Preparation for delivery shall be in accordance with GSFC S-311-P-079.

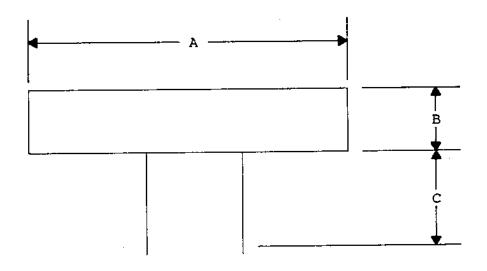


Figure 1

Note: Configuration 7 per MINCO bulletin HS-200

TABLE I.

Part No.	Figure	R (ohms)	Lead size (AWG)	Watts Max. 25°C	Volts Max. 25°C	A in (cm)	B in (cm)	C ft (m)
s-311-79/07-01	1	59.1	24	151	94.5	11.25 (28.57)	4.0 (10.16)	10 (3.04)